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3D Environment

Harnessing the power of the third dimension will revolutionize projection technology as we know it.   The culmination of infrared motion detection and three-dimensional holograms holds the potential to create an immersive, user-friendly virtual interface. Within twenty years, computer software, gaming experiences, and countless other computer-based technology currently stymied by its two-dimensional limitations will be able to take the next leap, into 3D.

This technology will allow users to reach beyond the typical experience that the mouse and keyboard currently provide.   For example, in photo-editing, the user would be able to physically reach out and manipulate the photos as if they were real: they could turn them mid-air, pull on the sides to resize, or paint with an actual paintbrush. In addition, people could hold email in their hands as if it was a paper copy. Essentially, it will make digital environments tangible.

Despite the potential, this dream requires a few advancements in other technology to become reality. In order to turn current holographic displays into 3D virtual environments a number of advancements would have to be made. The first would be an increase in holographic display technology, holograms that could project "around" subjects. In addition, current interactive computing systems already need a large amount of memory to operate (values in the gigabytes), and a jump to 3D from 2D would require many times that amount. The technology would also require complex algorithms for interaction between the user and the surroundings, including motion detection and appropriate responses. A bridge would need to be built between the real and the digital worlds, and improvements in computer hardware and software would need to be made before this dream could ever be a reality. Having the user 'feel' the items would also be nice, but is probably unachievable in twenty years.